

IN THE CLAIMS:

Please amend the claims as follows.

Claim 1 (Currently Amended): A gas detection method, in which a target gas is detected while oxygen is supplied to a sensor element of a metal oxide-type gas sensor, wherein the target gas is detected as a component gas separated in a separation column while water vapor is supplied together with the oxygen to the sensor element.

Claim 2 (Canceled).

Claim 3 (Currently Amended): A gas detection apparatus equipped with an oxygen supply means for supplying oxygen to a sensor element of a metal oxide-type gas sensor, wherein said gas detection apparatus is provided with a water vapor supply means for supplying water vapor to the oxygen supplied by said oxygen supply means to provide humidified oxygen, and a separation column for separating said target gas into a plurality of component gases; and

the target gas detected by the metal oxide-type gas sensor is a component gas that has been separated by this separation column
said gas detection apparatus being provided with a water vapor supply means for supplying water vapor to the sensor element.

Claim 4 (Canceled).

Claim 5 (Currently Amended): The gas detection apparatus according to Claim 3 [[4]], wherein the humidified oxygen is obtained through oxygen supplied from the oxygen supply means into water used for producing water vapor and stored in the water vapor supply means.

Claim 6 (Currently Amended): The gas detection apparatus according to Claim 3 [[4]], wherein the relative humidity of the oxygen in the humidified oxygen is at least 40%.

Claim 7 (Currently Amended): The gas detection apparatus according to Claim 3 [[4]], wherein the relative humidity of the oxygen in the humidified oxygen is from 40 to 80%.

Claim 8 (Currently Amended): The gas detection apparatus according to Claim 3 [[4]], wherein the humidified oxygen is supplied to the sensor element at a substantially constant flow per unit of time during the gas detection operation performed by the metal oxide-type gas sensor.

Claim 9 (Canceled):

Claim 10 (Currently Amended): The gas detection apparatus according to Claim 1 [[9]], wherein the component gas and the humidified oxygen are supplied separately in substantially the same direction to the sensor element.